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AUTHOR McLaughlin, Gerald W.; And Others
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ABSTRACT

The implementation and results of the Virginia Student Transition Program at Virginia Polytechnic Institute and State University (Tech) are described. The objective of the 5-week summer program is to facilitate the enrollment and retention of black college students with slightly lower than average aptitude scores through the development of academic and personal skills. During the 1983 summer program at Tech, 42 students were enrolled, and the 1984 program enrolled 52 students. Selection criteria included Scholastic Aptitude Test scores, high school rank, family economic condition, and high school grade point average. Program objectives were to: (1) develop increased knowledge in English, mathematics, biology or chemistry, writing, and reading; (2) develop skills in interpersonal interactions with peers, faculty, and administrators; (3) develop self-confidence and self-awareness; (4) gain knowledge of the complex university structure, its rules, regulations, and policies; and (5) learn successful study methods and time management. The selection of faculty and staff, credit, stipends, opening and closing ceremonies, and program evaluation are briefly discussed. Data on participant responses to attitude surveys administered before and after the summer program are included. (SW)

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RESULTS OF A SUMMER DEVELOPMENTAL PROGRAM ON MINORITY STUDENTS WITH LOW ACADEMIC SKILLS

Dr. Gerald W. McLaughlin
Associate Director
Institutional Research and Planning Analysis
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061
Telephone (703) 961-7923

Dr. Leroy Miles
Associate Professor, Education
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061
Telephone (703) 961-7576

Richard L. Einsporn
Research Assistant
Institutional Research and Planning Analysis
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061
Telephone (703) 961-6995

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SOUTHERN ASSOCIATION FOR INSTITUTIONAL RESEARCH

This paper was presented at the 1984 Annual Conference of the Southern Association for Institutional Research held in Little Rock, Arkansas, October 24-26, 1984. It was reviewed by the SAIR Publications Committee and was judged to be of interest and pertinent to others concerned with the research in higher education. This paper has therefore been selected to be included in the ERIC collection of Conference Papers.

Richard D. Howard
President, SAIR

RESULTS OF A SUMMER DEVELOPMENTAL PROGRAM ON
MINORITY STUDENTS WITH LOW ACADEMIC SKILLS

Abstract

More information is necessary if developmental programs are to help students with academic difficulties become involved in the mainstream of our higher education process. We should learn from others and then build on their experience to get the best possible program for the resources available. Our institution is in the second year of providing black students of lower academic ability with a transition experience in the summer. The intent of this program is to develop academic and personal skills, thus providing the participants with a greater likelihood of successful progress in their academic work.

We propose to present results of our program as it has progressed in the two years and also discuss developments anticipated in the program in the future. The specific results to be presented include summaries of the responses of the participants on attitude surveys administered before and after the summer program. The results of these surveys will be compared over the two years of the program. In addition participation in the program will be used as an independent variable to determine if the participants were more likely to actually enroll in the fall, had higher fall grades, had higher first year grades, had higher grades in mathematics, and English, and had a higher frequency of returning for their second year.

The samples are small with 42 in the first year group of the program, 53 in the second year group, and 34 in a comparable group from the first year who were not enrolled in the program. The preliminary results indicate that significant differences do exist in the likelihood that students who participate in the program will return for the fall. The results also indicate that after covarying out CEEB scores, those in the program have somewhat, but not significantly, higher overall grades. Results related to the second year students and related to the performance in specific courses will be available later in the summer.

We feel that this paper will help those who are concerned about enhancing the skills of students who have lower academic abilities. At the same time, we feel that the paper will enable others to put their developmental programs into proper perspective.

Results of a Summer Developmental Program on Minority Students With Low Academic Skills

Program Description

As set forth in the Amendments to the Virginia Plan for Equal Opportunity in the State Supported Institutions of Higher Education, the Virginia Student Transition Program was established. The program was designed to facilitate the enrollment and retention of black Virginia high school graduates who enroll at principally five state higher education institutions: George Mason University, James Madison University, the University of Virginia, the College of William and Mary and Virginia Polytechnic Institute and State University. Funds for the operation of the program as well as administrative oversight is provided by the State Council of Higher Education of Virginia (SCHEV). As determined by SCHEV, each of these institutions would receive a minimum of $40,000 to enroll a minimum of 40 students in a six-week intensive program during the summer. The program at Tech is administered during five-week period coterminous with the first summer term.

The 1984 summer program marked the second year of operation. Virginia Tech enrolled 42 students during the first year and 52 the second. The increase in students for the second year was due to additional funds made available by SCHEV. It is also important to note that Virginia Tech made resources available to enroll up to 70 students. The higher goal, however, was not reached because of the difficulty in attracting additional students due in part to the time the recruitment effort was begun.

In terms of the recruitment effort, two staff members of the Virginia Tech Office of Admissions were used to contact and recommend students for the program. These were minority recruiters who have considerable

experience in working with minority students. From a list of students who had SAT scores in the slightly below than average range, students were selected who could possibly benefit from the program. In addition to SAT scores, high school rank, family economic condition, and high school grade-point-average were used as criteria for selection. Overall, the intent was to select individuals who, after being admitted, had the greatest potential for success at Tech as a result of the program.

Program Objectives

Objective 1. Develop increased knowledge in English, mathematics, biology or chemistry, writing, reading and retention.

A major objective of the program is to enhance the academic skills of students whose background in high school was somewhat deficient. Consequently, instruction in English, mathematics, biology, and chemistry was offered. The students attended regular scheduled classes on a daily basis for five weeks. It was felt that these subject areas were most important for these beginning students because they tend to cause them the most difficulty during the freshmen year. Moreover, in an effort to provide the best instruction possible, professors are chosen carefully to participate in the instructional phase. Persons who are "good" teachers and who are regular faculty members with years of experience with the University are selected to provide instruction. For the most part, the same instructors have been used in both 1983 and 1984.

Objective 2. Develop skills in interpersonal interactions with peers, faculty, and administration.

This objective focuses on the student's ability to meaningfully interact with others in the academic environment. A large part of a

student's success depends on his/her ability to develop working relationships. Because of previous backgrounds, many of these students have not had the opportunity to interact with persons of different races, classes, and statures. The program seeks to provide experience that allows students to meet and understand faculty demands, interact with students of different persuasions, and understand the nuances of university administration. By virtue of the five weeks experience on campus with faculty, students and administrations, more positive interpersonal relationships are established.

Objective 3. Develop self-confidence and self-awareness.

Students who participate in this program are minority students who have not experienced the University environment and, therefore, may be a little uneasy. The level of anxiety experienced may drastically interfere with their academic work. The program seeks to dispel these anxieties by giving them a feel for the University and at the same time giving them the self-confidence that they can do college level work. Group sessions are held twice per week with counselors to discuss issues surrounding black students on white campuses and related topics.

Objective 4. Gain knowledge of the complex university structure, its rules, regulations and policies.

Success at Virginia Tech involves more than excelling in one's academic work. An objective of the program is to acquaint students with policies and procedures of the University. Areas such as the honor system, eligibility requirements, and faculty demands are stressed. Again, this objective is accomplished through weekly meetings with students.

Objective 5. Learn successful study methods and time management.

Classes are held weekly on study methods and time management. Often, students come to the University believing that study habits developed in high school will suffice in college. This phase of the program is designed, through structured classes, to provide students with knowledge of how, when, and under what conditions study is most meaningful.

Program Operation

In terms of program operation and management, a number of facets such as the selection of faculty and staff -- already briefly discussed, credit, stipends, open and closing activities, and evaluation procedures had to be carefully considered. A brief discussion of each follows.

Faculty and Staff

As mentioned earlier, the faculty was comprised of persons who had experience in working with students with academic deficiencies. The original selection of faculty to teach in this program was made by the Vice Provost for Administration in collaboration with the Program Director and other key university personnel. These faculty persons performed admirably the first year and were carried over the second year. When it was decided to expand the program in 1984, faculty members made recommendations as to which additional faculty would be appropriate to teach in the program. Selected staff members were involved in the program in a number of ways. A group of key staff members were assembled from various departments: Housing, Admissions, Counseling, Financial Aid, and Institutional Research. Other offices such as the Provost Office, Payroll, Student Accounts, and Student Affairs were intimately involved in working out details for the program. Peer helpers and tutors were also used with positive results. The second year we were fortunate to include some of the first year's students in our program.

Academic Credit

Students who participate in the program receive no academic credit for classes taken. They are told initially that credit would not be awarded and that their involvement is only to deal with deficiencies. It may be necessary, in future programs, to consider the feasibility of credit bearing courses. Students feel that classes taken should bear some credit.

Stipend

Regarding stipends, the original intent of the 1983 Amendments was to provide work study opportunities for program participants. For Virginia Tech Transition students, it was determined that work and study in a short intensive period would be detrimental to student success. We agreed that a modest stipend, to offset total loss of summer earnings, would be beneficial. All students who participate are, therefore, awarded a $200 stipend for the summer, distributed weekly at $40 per week.

Open and Closing Ceremonies

The opening ceremony has principally two purposes: (1) to acquaint students with the program's operations and procedures, and (2) to develop a sense of belonging and togetherness. All students, faculty, staff, and key University officials are invited and encouraged to participate. Introductions are made and details of the program explained. University officials welcome the students and provide a work of encouragement.

The closing ceremony involves a final assembly of students, faculty, and staff. At this meeting certificates of participation are given to each student. In addition, special awards were given to students with the best performance in each of the academic units. Along with the certificates of

participation, each of these students was awarded a bookstore voucher in the amount of $100 toward the purchase of books and/or other academic related items. Instructors had the option of making one award per academic unit or dividing it among several students. Two awards were given in mathematics.

Evaluation

A very important aspect of the program is to conduct an extensive evaluation. The evaluation takes place in several phases: (1) pre- and past-assessment of student's interest and program effect, (2) teacher evaluation of the content offered, and (3) evaluation of faculty and staff from students' perspectives. Because of the University's commitment to the program as well as SCHEV's commitment, these evaluations are essential for the continual improvements of the program.

As noted, in our Summer Transition Program we are seeking to strengthen academic skills and study habits, develop social skills, increase self awareness, and familiarize the student with the university environment. These objectives fit together in our overall goal which is to increase the survivability of these students.

In our pre-assessment, we have collected information on the background of the student, the reasons for enrolling in our university, and the confidence in the functional area. In our post-assessment, we collected information on the positiveness of the STP experience, along with the usefulness and quality of the aspects of the program in each of the areas. In the assessment of the goal, we investigated the enrollment of the students, their grades, and their status as the end of their first year.

The following tables show the results of these assessments. These students enrolled in our university to get good jobs and to develop academic

skills. They feel that they might possible have some academic difficulty, but as show by the average of 3.82 on the confidence, they are a long way from worried about their academic skills. In terms of the program, all aspects were seen as positive, especially the social and the familiarization aspects. They felt that the academic help was most useful along with the familiarization. These two were also seen as having the highest quality.

One other generalization which can be drawn from these data is that these students do not feel the need to participate in an analysis of themselves and their career choice. They are very confident and do not in general feel any need to change in any major ways. This interpretation is supported by responses that they made to open-ended questions and comments made in several group meetings.

In terms of our goal, we were able tc compare the group which entered in 1983 with two other groups of minority students. The first group expressed an interest in attending but were not selected because of resource constraints. The second group was invited to apply but were not interested. These three groups are fairly comparable with the main difference being that those accepted had lower SAT scores which was one of the final determinations of acceptance.

In terms of enrollment, it is obvious that many of those not applying for the program did not plan to attend the institution. The STP program provided an early warning system for their change of mind. Of those who did attend the program, all but two actually enrolled through the fall census date. The traditional predictors of SAT and HSR were relevant for the minority students in that the grades through spring quarter reflected the same order as seen in the predictors. We used analysis of covariance to adjust for this difference and again found that applying for the program

seemed to demonstrate some characteristic which was also related to performance.

At the same time, attending the program did not seem to help in general grades. Attendance did seem to help in terms of academic standing at the end of spring quarter. Those who had been in the program had the largest percentage in good standing with 17% on academic drop. For the other two groups, 21% and 26% were on academic drop. These numbers are too small to make definitive statements, but their direction is encouraging.

Conclusions and Discussions

Based on available information to date, the program can be viewed as successful. Instructors feel that the courses are beneficial in the sense that they help to bridge the gap between students with some academic deficiency and academic success at Tech. Students generally believe that the program will help them to succeed both academically and socially.

There were, however, some aspects of the program which will require more attention in the future. An important concern is the stipend. Although designed to help defray the total loss of summer earnings, a few students seem to participate simply for the money. Motivation appears to be negatively tied in with the stipend. We feel that the stipend is an important aspect of the program and should not be discontinued. Our dilemma is to determine the students who can benefit from the stipend and at the same time eliminate others who participate solely for the money.

A second problem encountered was absenteeism. This year the absenteeism ratio appeared to be higher than last based on complaints from instructors. Some students apparently did not feel that classes were meaningful to them and therefore just did not bother to attend. A better system needs to be developed to monitor the absenteeism rate.

A third dilemma centers around the awarding of academic credit for classes taken in the program. Because students put in the same amount of time in classes as regular students, there is a feeling that credit should be granted. The program staff does not agree with this notion simply because it may serve to discourage students if they receive grades lower than expected. The intent we believe should continue to be that of helping students to overcome deficiencies in their prior academic experiences and to equip them with the necessary academic and interpersonal skills to succeed at Tech.

And finally, an overriding problem appears to be that of getting more students to participate in the program. This year we had the resources to help up to 70 students, we enrolled only 53. As mentioned earlier, this may have been due to the lateness of our recruitment and selection efforts. We need to determine if potential participants have negative feelings about their involvement in the program or, on the other hand, if they believe that their record is not a true indication of their ability. In any event, the problem must be solved if we are to reach out to more students and help them to successfully compete at Tech.

SUMMER TRANSITION PROGRAM

Objectives:

1 Develop increased knowledge in the areas of English, mathematics, and the basic sciences.

2 Develop skills in interpersonal interactions with peers, faculty, and administration.

3 Develop self-confidence, esteem, awareness.

4 Gain knowledge about the complex university structure; i.e., rules and regulations, policies, faculty demands, etc.

Goal: increase survivability.

OBJECTIVE 1

ACADEMICS

Preference for high school subjects (1984)

	% Liked Most	% Liked Least
English	7.6	22.6
Foreign Language	15.4	7.5
Mathematics	36.5	26.4
Sciences	26.9	15.1
Social Studies	13.4	28.3
N	52	53

OBJECTIVE 1

ACADEMICS

Develop increased knowledge in the areas of English, mathematics, and the basic sciences.

Background

	1983	1984
Aspiring to a master's degree or higher	57%	70%
Member of academic honor society	28%	22%
Some experience with computers	52%	72%
High school rank	73.5	68.7
SAT Math	409	434
SAT Verbal	355	375

OBJECTIVE 1

ACADEMICS

Importance of reasons in decision to attend (1 = not relevant to 5 = extremely important)

	1983	1984
Strong academic reputation	3.98	4.06
Availability of academic support	3.83	3.54
Availability of intellectual challenges	3.69	3.59

OBJECTIVE 1
ACADEMICS

Confidence (1 = very unsure to 4 = very sure)

	1983	1984
Basic academic skills in reading	3.07	3.31
Basic academic skills in writing	2.81	3.17
Basic academic skills in mathematics	3.19	3.26
Basic academic skills in sciences	2.98	3.06

Positiveness of STP experience (1 = very negative to 5 = very positive)

	1983	1984
Reading skills	3.95	4.00
Writing skills	4.39	4.22
Mathematic skills	4.05	3.94
Chemistry/sciences skills	3.16	3.73

OBJECTIVE 1

ACADEMICS

Program aspects

	Usefulness[1]		Quality[2]	
	1983	1984	1983	1984
English	2.95	2.92	4.61	4.49
Mathematics	2.73	2.76	3.97	4.29
Chemistry/Science	2.19	2.82	3.82	4.18
Study Skills	2.35	2.22	3.45	3.24
Reading Comprehension	2.35	2.24	3.47	3.24
Academic Tutoring	2.62	2.82	3.92	4.20

[1]Scaled 1 = not useful to 3 = very useful

[2]Scaled 1 = very weak to 5 = very strong

OBJECTIVE 2

SOCIAL

Develop skills in interpersonal interactions with peers, faculty, and administration.

Background

	1983	1984
Belong to three or more social clubs in high school	76%	76%
Earn one or more letter in sports	52%	67%
Earn one or more letter in other activities	38%	39%
Member of one or more occupational clubs	76%	70%
Member of one or more non-school clubs	81%	91%
Plan to participate in one or more organizations	N/A	92%

OBJECTIVE 2

SOCIAL

Importance of reasons in decision to attend (1 = not relevant to 5 = extremely important)

	1983	1984
Friends already attending or planning to attend	1.88	2.13
Expectation of desirable social life	2.62	2.65
Relatives who are or were attending	1.24	1.39

OBJECTIVE 2

SOCIAL

Confidence (1 = very unsure to 4 = very sure)

	1983	1984
Ability to interact with teachers and administrators	3.62	3.44
Meeting individuals of other races	N/A	3.65
Relating to individuals of the opposite sex	N/A	3.67

Positiveness of STP experience (1 = very negative to 5 = very positive)

	1983	1984
Ability to interact with teachers and administrators	4.37	4.30

OBJECTIVE 2

SOCIAL

Program aspects

	Usefulness[1]		Quality[2]	
	1983	1984	1983	1984
Recreational activities	2.32	2.27	3.50	3.43
Housing arrangements	2.43	2.45	3.92	3.67

[1]Scaled 1 = not very useful to 3 = very useful

[2]Scaled 1 = very weak to 5 = very strong

OBJECTIVE 3

SELF

Develop self-confidence, esteem, awareness.

Background

	1983	1984
Decide to apply to Virginia Tech in the last year	74%	70%
Decide on a career for two or more years	N/A	59%
Three or more leadership positions in organizations	45%	50%
Work preceding summer	48%	55%
Work during senior year	40%	43%
Work two or more years in high school	N/A	40%

OBJECTIVE 3

SELF

Importance of reasons in decision to attend (1 = not relevant to 5 = extremely important)

	1983	1984
Anticipated job opportunities	4.17	4.09
Availability of specific curriculum	3.98	3.94
Chance to develop self-confidence	3.62	3.57
Chance to develop self-awareness	3.67	3.50

OBJECTIVE 3

SELF

Confidence (1 = very unsure to 4 = very sure)

	1983	1984
Understanding yourself and your goals	3.57	3.54
Ability to use time in most effective manner	3.05	3.11
Selecting a specific career after college	3.43	3.24

Positiveness of STP experience (1 = very negative to 5 = very positive)

	1983	1984
Understanding yourself and your goals	4.32	4.37
Ability to use time effectively	3.79	3.94
Understanding career selection	4.19	3.98

OBJECTIVE 3

SELF

Program aspects

	Usefulness[1]		Quality[2]	
	1983	1984	1983	1984
Time management	2.35	2.73	3.45	3.67
Discovery groups	2.03	1.73	3.32	2.79

[1]Scaled 1 = not very useful to 3 = very useful

[2]Scaled 1 = very weak to 5 = very strong

OBJECTIVE 4

FAMILIAR

Gain knowledge about the complex university structure; i.e., rules and regulations, policies, faculty demands, etc.

Background

	1983	1984
Mothers with some college education	36%	60%
Fathers with some college education	38%	58%
Parent had attended Virginia Tech	N/A	4%

OBJECTIVE 4

FAMILIAR

Confidence (1 = very unsure to 4 = very sure)

	1983	1984
Understanding what faculty expect	3.29	3.20
Understanding the rules, regulations, procedures	3.29	3.31

Positiveness of STP experience (1 = very negative to 5 = very positive)

	1983	1984
Understanding what faculty expect	4.47	4.41
Understand the rules, regulations, procedures	4.39	4.18

OBJECTIVE 4

FAMILIAR

Program aspects

	Usefulness[1]		Quality[2]	
	1983	1984	1983	1984
Program administration	2.73	2.65	4.46	4.26

SUMMARY MEAN RATINGS

FOR FOUR OBJECTIVES OVER TWO YEARS

Factor	Academic	Social	Self/Career Orientation	Familiar-ization
Importance in decision to attend	3.78	1.99	3.81	N/A
Confidence[a]	3.82	4.50	4.10	4.03
Program				
Positiveness of experience	3.93	4.36	4.10	4.36
Usefulness[a]	4.16	3.74	3.42	4.38
Quality	3.91	3.63	3.31	4.36

[a]Converted to the equivalent of a five-point scale.

PROFILE BY GROUP

Variable	Mean		
	STP	Interested Not Invited	Not Interested
All			
SAT	764	851	801
SAT Verbal	355	403	380
SAT Math	409	448	421
HS Percentage Rank	73.5%	83.5%	81.5%
HS Class Size	303	321	362
Enrolled			
SAT	761	854	785
HS Percentage Rank	72.5%	83.4%	80.4%

SURVIVABILITY 1983-84

(Summer 1983)

	STP	Interested Not Invited	Not Interested
Enrollment			
Enrolled	40 (95%)	28 (82%)	46 (45%)
Not Enrolled	2 (5%)	6 (18%)	57 (55%)
QCA (Through Spring)			
Actual	1.80	1.95	1.76
Adjusted	1.86	1.88	1.77
Academic Status			
Good Standing	33 (83%)	22 (79%)	34 (74%)
Academic Drop	7 (17%)	6 (21%)	12 (26%)